

Pola Spasial Propagasi Sistem Televisi Digital Terrestrial di Kota Jakarta Timur = Spatial Pattern of Propagation Digital Terrestrial Television System in East Jakarta City

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20509396&lokasi=lokal>

Abstrak

Media televisi merupakan salah satu media yang dapat menyampaikan informasi dan hiburan bagi seluruh masyarakat Indonesia secara Free to Air. Perkembangan televisi telah masuk ke sistem digital terrestrial yang memiliki banyak keunggulan daripada sistem sebelumnya (analog). Sifat gelombang radio untuk penyiaran televisi digital terrestrial yang merambat atau propagasi menyebabkan terjadinya refleksi dan difraksi akibat adanya gangguan atau halangan (barrier) berupa gedung tinggi dan pepohonan. Sehingga, terjadi variasi nilai propagasi sistem televisi digital terrestrial. Hal tersebut menjadi tujuan penelitian ini dalam mengetahui pola propagasi sistem televisi digital terrestrial dan mengetahui pengaruh kondisi fisik terhadap nilai propagasi sistem televisi digital terrestrial. Total lokasi sampel yang diambil berjumlah 63 lokasi yang dipilih berdasarkan grid 2x2 km dengan mempertimbangkan variasi karakteristik variabel yang digunakan yaitu tutupan lahan, relief, arah hadapan lereng, jarak dari pemancar, ketinggian, dan halangan tinggi bangunan. Metode analisis yang digunakan menggunakan analisis spasial berupa unit analisis grid 1x1 km wilayah penelitian dan analisis korelasi. Hasil penelitian ini menunjukkan bahwa pola propagasi sistem televisi digital terrestrial menyebar secara acak (random) untuk Kelas Sedang di wilayah Tengah dan Timur Laut dari Kota Jakarta Timur dan mengelompok (cluster) untuk Kelas Buruk di wilayah Utara dan Barat Laut Kota Jakarta Timur dan Kelas Baik di wilayah Selatan Kota Jakarta Timur. Berdasarkan analisis korelasi, pola propagasi sistem televisi digital terrestrial dipengaruhi oleh kondisi fisik wilayah dari variabel ketinggian dan halangan tinggi bangunan.

Television media is one of the media that can convey information and entertainment for all Indonesian people on a Free to Air basis. The development of television has entered the digital terrestrial system which has many advantages over the previous system (analog). The nature of radio waves for broadcasting digital terrestrial television that propagates or propagation causes reflection and diffraction due to interference or obstacles in the form of tall buildings and trees. Thus, there is a variation in the value of the propagation of digital terrestrial television systems. This is the purpose of this research in knowing the propagation patterns of digital terrestrial television systems and knowing the effect of physical conditions on the propagation value of digital terrestrial television systems. The total sample locations taken amounted to 63 locations selected based on the form of a 2x2 km grid by considering variations in the characteristics of the variables used, namely land cover, relief, the direction of the slope, distance from the transmitter, height, and building height barriers.

Analytical methods used is spatial analysis in the form of a 1x1 km grid analysis unit for the study area and correlation analysis. The results showed that the propagation pattern of the terrestrial digital television system spread randomly (random) for Medium Class in the Center and Northeast areas of East Jakarta City and the group (cluster) for Bad Class in the North and Northwest areas of East Jakarta City and the Good Class in the South areas of East Jakarta City. Based on the correlation analysis,

terrestrial television system
is influenced by the physical condition of the region of the variable height and high barrier of
the building against the propagation pattern of the terrestrial digital television
system.